

Plate No. 25  
Operation of Demountable Rim

can be removed, disassembled and heavy steam cylinder oil or a good grade graphite grease applied between spring leaves.

After the car has been driven a few hundred miles there is a tendency for the spring clips to loosen. The spring clips should be tightened as often as found necessary.

Broken springs are almost invariably caused by careless driving or loose spring clips. See that spring clip nuts are tight at all times.

## WHEELS

McLaughlin automobile wheels are of the artillery type in which the spokes meet at the center and are bolted between the flanges of metal hubs. A steel felloe band is shrunk on the wooden felloe to carry the demountable rim and tire.

### TO REMOVE THE RIM

The demountable rims are of the bolted on type and may be removed from the wheels with the tire by the following operations:

Remove the dust cap and nut from air valve stem. With the rim wrench remove all of the nuts from the bolts except the one on each side of the tire valve, which should be loosened (Fig. 1). Insert screw driver end of the demountable rim wrench between the felloe and wedge to pry loose and remove (Fig. 2). After wedges have been removed turn wheel until tire valve is in upper position and pull lower portion of the tire towards you until it clears the felloe sufficiently to raise up to disengage the valve stem from the felloe (Fig. 3).

### TO REPLACE RIM

To replace rim on wheel the tire must be fully inflated. Insert valve stem in proper hole in felloe and driving lug over rim bolt (Fig. 3) and force lower part of rim on the wheel with the foot. Replace all wedges, drawing them up evenly until all are tight. Squeaking rims are usually caused by loose wedges. Note that edges of rim at split are even and not more than 1/32 inch apart.

### TO REMOVE TIRE FROM RIM

First of all make sure that the tire is fully deflated before attempting this operation.

To take the rim out of the tire, lay rim and tire flat with the notched side of locking plate up. Unlock rim by inserting screw driver end of rim wrench into locking plate (see Fig. 4) and turn until clear of locking plate. Insert screw driver end of rim wrench in the notch in the locking plate as in Fig. 5 and pry the lock plate clear of the hole. Continue this operation until the end of rim which carries the lock plate is free from tire and rim (Fig. 6). Grasp the free end of the rim firmly with the hands, holding the tire firmly with the foot, and pull the rim entirely out of the tire as in Fig. 7.

### TO REPLACE TIRE ON RIM

Turn the rim over so that the end with the valve stem hole is on top. Place rim flat as before. Insert valve stem in hole in rim, place both tire beads in rim for 2/3 of distance around tire (see Fig. 8), turn tire and rim over, prying in on rim and forcing it down into position with the foot (see Fig. 9), with screw driver end of wrench pry rim into place so that ends butt together (see Fig. 10). Lock rim by means of rim wrench (see Fig. 11). The tire is now ready for inflation.

### TIRES

Tires are of the standard straight cord type, into which two rings of braided steel wire are moulded to form the beads which hold the tire on the rim.

Punctures cannot be avoided, but a well inflated tire is less likely to pick up nails than a soft one. Bruises, cuts and sand boils can generally be avoided by careful driving, but should be repaired as soon as they appear. Gasoline and oil should be kept away from the tires as they tend to soften the rubber. If car is to be out of service any length of time, remove tires, deflate to a few pounds pressure and store in a cool, dark place. Three-fourths of all tire trouble is due to lack of pressure; therefore, a gauge should be used to determine the pressure and the tire should be kept inflated to proper pressure.

### BODY

The body is the passenger carrying part of the car and consists principally of an oak frame covered with a steel shell, and into which the seats and cushions are fitted. It is bolted to the frame of the car, and to prevent squeaks, the body bolts should be kept tight. Aside from washing and cleaning, the body will require no further attention.

### WASHING

When washing the car, soak the dirt off with a gentle stream of cold water. Do not use a nozzle. Do not rub. Mud is much more easily removed before it gets dry and hard. Grease can be removed with soap suds and a soft sponge. Rub as little as possible and use a neutral soap. Rinse thoroughly with cold water, dry and polish with a piece of clean soft chamois skin.

### TOP

The top should never be folded until it is thoroughly cleaned and dried. Dust on the outside can be removed from black material by washing with clear cold water. Be sure to rinse thoroughly with clear cold water or clean with a clean moist cloth. The inside should be dusted out with a stiff whisk broom.

### PUTTING TOP DOWN.

In order to protect the rear curtain light from breakage when the top is down, snap the two fasteners together. These are located on inside of back curtain just above back of rear seat.

Top cannot be raised while back curtain support straps are snapped in place.

The door curtains are provided with steel supports which can be inserted in the sockets on the doors.

When folding the top, unfasten side wings, be sure that the side curtains are properly folded up, and that the folds of the top do not get caught between the bow spaces. Do not fold top when wet or damp. This also applies to side curtains.

### TO RAISE THE TOP.

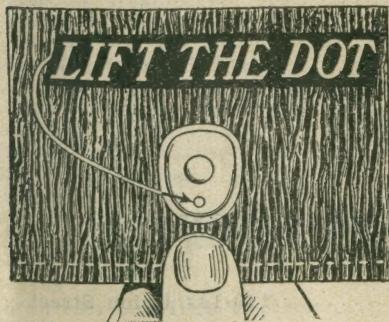
In case of rain, or as a protection from the sun, the top may be raised as follows: Remove straps which fasten the bows to the top, holders on the rear of the body. Next pull up and ahead on the front bow until the top is fully extended, fasten in this position by attaching to windshield posts in front, the top can be raised most easily from inside the car.

The side curtains of all models are carried under the rear cushion, or in a compartment in the rear of the front seat.

Pockets for side curtains when not in use are supplied with all open models. This is to protect the lights in the side curtains as much as possible.

**CAUTION.**

In the case of jobs fitted with detachable Victoria side curtains with bevel glass light, do not put these under the rear cushion. They should be folded and placed in the two rear door pockets. This is important to prevent breakage of glass.

**LIFT THE DOT FASTENER**

The "Lift the dot" fastener is used to fasten the side curtains in place. To remove fastener from over stem, grasp the curtain just below the fastener as shown in cut and give it a sharp, quick jerk.

**WINDSHIELD**

The windshield is adjustable for rain vision and ventilation by swinging the glass in or out. Friction stops hold the glass in any position and may be tightened by turning the wing nuts and the small acorn nuts on the posts. The large nuts which fasten the windshield posts to the cowl bracket should be kept tight at all times.

**CAUTION****CHANGING OIL IN THE MOTOR.**

Due to the quality of the gasoline which is being supplied for use now-a-days, a proportion of same will not fire or explode in the combustion chambers. This unexploded mixture is forced down past the pistons with each explosion in the firing chamber and mixes with the lubricating oil in the crank case. This liquid thins the oil and kills the lubricating qualities of the oil to such an extent that after four or five hundred miles use the oil is almost the consistency of coal oil and is not acting as a good lubricant at all and is allowing undue wear to take place in the motor.

It would, therefore, be advisable to change the oil in the crank case every four or five hundred miles so as to keep wear and tear in the motor down to the minimum. Always use good quality of oil of medium or slightly heavier weight.

**COASTING.**

When descending a grade it is both permissible and proper to use the motor as a brake. To do so, remove foot from accelerator pedal and see that throttle lever is fully closed. If necessary shift the gears into second speed.

Do not, however, turn off the ignition, as the motor will continue to force through and into the muffler enough of raw or unexploded gas to fill the muffler, and when ignition or switch is again turned on the hot exhaust gases will explode the accumulated gas in the muffler and blow the outer casing off the muffler.

When the grade is so steep that this will not check the momentum, use the foot and emergency brakes alternately. Don't use either one for any length of time, as it will result in overheating the brake bands and drums.

## McLAUGHLIN BRANCHES.

St. John, N.B., Branch .....	140-144 Union Street
Montreal Branch .....	Crescent and St. Catharine Street
Belleville Branch .....	2 Bridge Street
Toronto Branch .....	Cor. Church and Richmond Streets
Hamilton Branch .....	36-40 Bay Street S.
London Branch .....	Bathurst and Richmond Streets
Winnipeg Branch .....	204-212 Princess Street
Regina Branch .....	Cor. 14th Avenue and Broad Street
Saskatoon Branch .....	First Avenue
Calgary Branch .....	331-341 7th Avenue W.
Edmonton Branch .....	10048 104th Street
Vancouver Branch .....	1219 Georgia Street

**DEALERS EVERYWHERE**

# INDEX

Alemite Lubrication	13
Adjusting Bearings	25
Adjustment of Carburetor	32
Adjustment of Clutch	55
Adjusting Headlights	13
Assembling Connecting Rods	27
Adjusting of Push Rods	23
Adjusting of Spark Plugs	41
Adjusting Spiral Bevel Gears	60 and 61
Adjusting Timing Contacts	40
Ammeter	43
Anti-Freezing Mixture	53
Battery Guarantee	47
Battery	47
Battery, Condensed Rules for Operation	48
Battery, Service Stations	49
Body	70
Brakes	62 and 65
Carburetor and Heat Control	30 and 31
Caution	43
Circuit Breaker	43
Circuit Diagram	43 and 44
Coasting	71
Condenser	40
Control Lever	57
Cooling System	51
Clutch	52 and 53
Changing Oil in Motor	71
Deleo System	35
Differential	59
Distributor	38 and 39
Draining	53
Driving	11
Emergency Stops	11
Engine	20-21-22
Engine, How it Works	23
Engine Lubricating System	27
Exhaust System	55
First Speed Position	56
Front Axle	64 and 65
Front Hubs	65
Fuel System	29
Gasoline Gauge	33
Gearset	55
Grinding Valves	25
Guarantee	7
Hand Cranking	8
Handling the Spark	11
High Speed Position	56
High Speed	9
Horn, Electric	45 and 46
Ignition Coil	41 and 42
Ignition, Timing of	41
Ignition and Lighting Switch	42 and 43
Inserting Piston Rings	25
Introduction	2
Keeping the Engine Clean	27
License Application	7
Low Speed	9
Lubrication, General	16 and 17
Lubrication, Generator	39

Lubricants	19
McLaughlin Branches and Dealers	72
McLaughlin Models	3-4-5-6
Motor Generator	34-35-36-37
Neutral Position	56
Operation	8
Oil Circulating Pump	26 and 27
Oil Pressure Gauge	29
Oil in Motor	17 and 71
Operating Alemite	15
Overhauling	19
Power Plant	19
Propellor Shaft	59
Putting Car in Service	51
Racing the Motor	12
Radiator	53
Radiator Fan	53
Radiometer	46
Rear Axle	58 and 59
Rear Axle, Instruction for Adjusting Gears	60 and 61
Regulation, Generator	37
Removing Carbon	25
Resistance Unit	40
Reverse Position	57
Rules of the Road	12 and 13
Running Positions	8
Second Speed Position	56
Second Speed	9
Shifting Down	9
Shifting Gears	9
Shifting Weights	7
Skidding	12
Speeding	12
Speedometer	57
Springs	67
Spring Seats	65
Starting on a Grade	12
Steering	11
Steering Gear	66 and 67
Storing Car for Winter	50
Tie Rod Adjustments	65
Top	70
To Remove Rims	69
To Remove Tire from Rim	69
To Replace Rim	69
To Replace Tire on Rim	69
To Reverse	11
To Start the Car	9
To Start the Motor	8
To Stop the Car	11
To Stop the Motor	12
Transmission	54 and 55
Use of Lights	13
Universal Joint	57
Valves, Timing of	23
Vacuum Tank	.28 and 29
Washing Body	70
Watch the Instruments	13
Water Pump	53
Wheels	68 and 69
Wheel Hubs	.63 and 64
Windshield	70
Warranty	7